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| EXAMINER |
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SHAH, PARAS D

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| ART UNIT | PAPER NUMBER |
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2626

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02/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,658

Applicant(s)

SCHONEBECK, BERND

Examiner

PARAS SHAH

Art Unit

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-26, 28-38 and 40-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-26, 28-38 and 40-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This communication is in response to the Amendments and Arguments filed on 11/19/2008. Claims 23-26, 28-38, and 40-46 are pending and have been examined, with claims 27 and 29 being cancelled. The Applicants' amendment and remarks have been carefully considered, but they do not place the claims in condition for allowance.
2. All previous objections and rejections directed to the Applicant's disclosure and claims not discussed in this Office Action have been withdrawn by the Examiner.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/19/2008 has been entered.

Response to Arguments

4. Applicant's arguments (pages 6-13) filed on 11/18/2008 with regard to claims 23-26, 28-38, and 40-46 have been fully considered but they are moot in view of new grounds for rejection.

The arguments related to the 112 1st rejection, however, have not been found to be persuasive. The Specification does not provide support for the terminology of "

executing from a digital storage media in a computing appliance." Hence, it is unclear what the Applicant is seeking to patent due to its lack of support in the Specification, whether the terminology includes transmission or storage medium such as RAM, ROM, flash memories. Further, the Applicant has failed to show support for the limitation in the Specification. The rejection is maintained.

The arguments regarding directed towards the reference of Mast has been considered moot in view of a newly applied reference to teach the claimed limitations in light of the newly amended claim limitations.

Response to Amendment

5. Applicants' amendments filed on 11/19/2008 have been fully considered. The newly amended limitations in claims 23 and 35 necessitate new grounds of rejection.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation in claim 35 recites the limitation of

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“executing from a digital storage media in a computing appliance,” which was not disclosed in the original application as filed on 05/10/2005.

8. Claims 36-46 are rejected as being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 23-26, 28, 30, 33-38, 40, 42, 45, and 46 rejected under 35 U.S.C. 102(e) as being anticipated by Roushar (US 7,403,890).

As to claim 23, Roushar teaches a language-processing system comprising:

a computerized appliance (see col. 45, lines 64, knowledge appliance device) having user input and output interfaces (see col. 46, lines 35-67, various input and output interfaces)), one or more processors (See col. 46, lines 5-11, one or more processors), and one or more machine-readable media accessible to the one or more processors (see col. 46, lines 20-35, various memory components described); and

operating code executed by the one or more processors from the one or more machine-readable media (see col. 19, lines 60-54, specialized software) for processing text and audio messages ;

wherein text and audio messages input (see col. 27, lines 44-49, input is from voice recognition (audio input) and keyboard) to the system are separated into words and phrases to be considered individually (see col. 27, lines 49-54, text stored in memory and objects from the sentences are stored temporarily and recognized), meaning is determined for individual ones of the words and phrases (see col. 36, lines 36-37, language analysis on object performed and see lines 66-67 and col. 37, lines 25-34, semantics of sentence components), resulting in statements of meaning(see col. 38, lines 38-40, cause and effect relationships), and the resulting meaning statements are linked (see col. 38, lines 38-40, cause and effect relationships), providing meaning for the message (see col. 39, lines 1-3 and lines 5-17, where the interpreter uses the results for further generation such as dialogue).

As to claims 24 and 36, Roushar teaches wherein logically false and meaningless input messages are identified by the nature of the linked-meaning statement (see col. 28, lines 6-10, fitness used after analyses (semantic) col. 28, lines 60-61 missing information and multiple interpretations questions are generated as a result of the input) (e.g. Missing information causes meaningless input and false input).

As to claims 25 and 37, Roushar teaches wherein ambiguous input messages are made clear by the nature of the linked-meaning statement (see col. 28, lines 60-62, clarifying questions are generated based on missing information or multiple interpretations)

As to claims 26 and 38, Roushar teaches further comprising a situation model updated as language is processed (see col. 39, lines 41-49, where the interpreters can learn).

As to claims 28 and 40, Roushar teaches wherein conflicts between the linked-meaning statement and the situation model are detected and reported to the user (see col. 5, lines 21-23, where the interpreter uses a knowledge base and col. 28, lines 60-col. 29, lines 3, where clarifying questions are presented to the user as stated in col. 28, lines 19-21).

As to claims 30 and 42, Roushar teaches wherein the system finds unlinkable meaning statements (see col. 28, lines 60-67 and col. 29, lines 1-3, missing or multiple interpretations cause unlinked statement until user inputs) and reports the unlinkable statements to an external entity (see col. 28, lines 19-21, user is presented questions).

As to claims 33 and 45, Roushar teaches wherein meaning are applied to user to measured values (see col. 27, lines 45-48, input received via various input devices and

see col. 27, lines 64-col. 28, lines 5, where multiple analyses including semantic and context analysis is performed), and these meanings are applied to the situation model (see col. 39, lines 41-46, learning by the interpreter done via mining processes for changes to knowledge base).

As to claim 34 and 46, Roushar teaches further comprising an artificial language intelligence (ALI) module (see col.36, lines28, interpreter based on language model) having cognitive routines of various classes (see page 36, lines 38-col. 37, lines 11, various analysis types), including routines for extraction of meaning (see col. 36, lines 66, semantics)), context-bound modification (see col. 37, lines 5, pragmatics associated with changes in context), context-bound association (see col. 37, pragmatics includes taxonomical descriptions of objects in real world), and logical inferences (see col. col. 37, lines 5-11, pragmatics), the ALI module making the routines available to the extractor (see col. Figure 10, where in step 1001 input is received and processing performed utilizing the routines of the interpreted in 1008 knowledge network, 1007 morphology analysis, 1010 semantics analysis, 1011syntax analysis, and 1012 context analysis), and other modules of the system (see Figure 10, and various modules interacting with each other).

As to claim 35, Roushar teaches a method, executing from a digital storage media (see col. 46, lines 20-35, various memory components described) in a computing

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appliance (see col. 45, lines 64, knowledge appliance device), for language processing, comprising the steps of:

(a) extracting individual words and phrases from a message input as either voice or text (see col. 27, lines 44-49, input is from voice recognition (audio input) and keyboard); and

(b) determining meaning for individual ones of the words and phrases, resulting in meaning statements phrases (see col. 36, lines 36-37, language analysis on object performed and see lines 66-67 and col. 37, lines 25-34, semantics of sentence components); and

(c) linking the extracted meanings into meaning statements (see col. 38, lines 38-40, cause and effect relationships),, providing a linked meaning statement (see col. 39, lines 1-3 and lines 5-17, where the interpreter uses the results for further generation such as dialogue).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 29 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roushar in view of Howard *et al.* (US 2001/0041980).

As to claims 29 and 41, Roushar teaches wherein conflicts (see col. 5, lines 21-23, where the interpreter uses a knowledge base and col. 28, lines 60-col. 29, lines 3, where clarifying questions are presented to the user as stated in col. 28, lines 19-21) are used to predict future or developing risk (see col. 28, lines 20-23, input used to achieve full understanding such as dialogue (see col. 39, lines 13-16)

However, Roushar does not specifically teach the system being used in control situations.

Howard *et al.* teaches the using semantic information for controlling situations (see [0010], information retrieval from a device, (see [0011], refrigerator).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have modified the language processing as taught by Roushar using it in conjunction with controlling devices as taught by Howard for the purpose of presenting information to the user based on user input for information retrieval (see Howard [0010], [0011].

13. Claims 31 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roushar in view of Shimomura *et al.* (US 2001/0021909).

As to claims 31 and 43, Roushar teaches all of the limitations as in claim 23 and 35, above.

Furthermore, Roushar teaches the use of the system in dialog (see col. 39, lines 17, dialogue) and further comprising a virtual realizer (see col. 36, lines

26-27, interpreter) recognizing meaning of the linked-meaning statements (see col. 36, lines 36-37, analysis of language object for paraphrasing, translations, questions or dialogue (see col. 39, lines 13-17) used by the system.

However, Roushar does not specifically teach the system adapted for control of technical systems, including robotic systems, used by the system for generating commands for the technical systems.

Shimomura *et al.* does teach control of technical systems, including robotic systems (see [0017], robot) used by the system for generating commands (see [0090], speech synthesizer outputs speech based on conversation) for the technical systems (see Figure 20, all steps and [0010], [0011], and [0082] it is realized by the topic manager whether the topic of the conversation has changed in order to best communicate with the user).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have modified the language processing as taught by Roushar using it in conjunction with robots as taught by Shimomura for the purpose of carrying out dialogue with a user (see Shimomura, [0002]) using the interpretation results as taught by Roushar.

14. Claims 32 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roushar in view of Stieler (US 6,044,322).

As to claim 32 and 44, Roushar teaches all of the limitations as in claims 28 and 38, above.

However, Roushar does not specifically teach the use of the system in a taxiway control for airports.

Stieler teaches the use of speech in taxiway control for airports (see col. 2, lines 15-27, traffic objects can be identified and output).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have modified the language processing as taught by Roushar using it in conjunction with taxiways as taught by Stieler for the purpose of traffic monitoring (see Stieler col. 1, lines 5-7).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Peterson (US 6,178,398) is cited to disclose language understanding from an input utterance. Bessho et al. (US 6,243,670) is cited to disclose semantic analysis of information. Messerly et al. (US 6,246,977) is cited to disclose information retrieval based on semantic representation. Binnig et al. (US 6,871,199) is cited to disclose processing text information for automated apprehension. Bush (US 7,174,300) is cited to disclose interpretation of data for air vehicles. Dusan et al. (US 2002/0178005) is cited to disclose adaptive language understanding using multimodal input.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PARAS SHAH whose telephone number is (571)270-

1650. The examiner can normally be reached on MON.-THURS. 7:00a.m.-4:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paras Shah/
Examiner, Art Unit 2626

01/23/2009
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Supervisory Patent Examiner, Art Unit 2626